

How to Establish a Satellite Downlink Site

Why Establish a Satellite Downlink Site?

The National Conservation Training Center has established the Conservation Training Network to provide training and information directly to your offices via our digital broadcasting system. By establishing a downlink site and becoming part of the network, your employees can participate in continuing education, learn new skills, and join thousands of their fellow employees in viewing important service-wide information and updates, all without having to leave your facility. NCTC has broadcast programs on Ethics, Cultural Resources, Stress Management, Endangered Species Act, Migratory Birds, Annual Reports by the Director and other topics. Additionally, using your satellite downlink, you can participate in events broadcast by members of the Government Education and Training Network (GETN). GETN, a network of Federal Government agencies (e.g., FWS, FAA, DOD, DOJ, NPS, and DOE), uses a common satellite carrier for interactive television (1-way video, 2-way audio). This interactive television satellite service is provided by AT&T Corporation (AT&T) in partnership with Convergent Media Systems (Convergent) and is offered through a GSA Federal Telecommunications Service Contract (GS00T00NSD0012).

What is included in a digital satellite downlink system?

Your basic system will include:

- Receive-only antenna (1.2 meters)
- Low noise block (LNB) converter
- Scientific Atlanta BSR-9234 Integrated Receiver/Decoder (IRD)
- Up to 200 feet of PVC IF Cable
- Grounding kit
- Shipping and Installation Labor
- Site Coordinator Training
- Documentation

What will the downlink system cost?

Total estimated cost for a basic system installed within the continental United States is \$5,700. Alaska, Hawaii, and areas of northern Washington state may require a larger dish, bringing the estimated cost to \$7,200.

What do I do first?

Order a Site Survey. The Site Survey determines the overall cost for satellite equipment installation and

establishes the dish size requirements (from 1.2 to 3.7 meters), dish and receiver recommended locations, and routing path for the wiring. The Site Survey cost is \$605.94. AT&T schedules and completes the site survey within 25 business days of receiving an order, contingent upon site access. Standard installation will be completed within 30 business days of receipt of customer-approved survey. You can order the site survey online at www.att.com/gov/sbs, by fax to Patrick Robertson at 703-277-7993, or by mailing the purchase order to the contractor at: AT&T Corporation, 3033 Chain Bridge Road, Oakton, Virginia 22185-0000. Patrick Robertson (Ph: 703-277-3855, Fax: 703-277-7993, Email: PRObertson2@att.com) is the AT&T point-of-contact. The Site Survey CLIN (Contract Line Item Number) is C-0001.

When ordering the site survey online, fill in the requested information. Insert the following responses to these items, as noted below:

- Existing Site Code - "N/A"
- Uplink Configuration - "N/A"
- Redundancy - "No"
- Active Channel Capacity - "1"
- IRD Configuration - "BSR9234"
- Video & Data - Place Checkmark here
- AT&T Client Business Mgr - "N/A"
- AT&T CBM Phone/Fax - "N/A"
- AT&T CBM email - "N/A"

In the Specific Site Requirements box, you should provide information about your location. Comment on the location of the classroom (e.g., classroom is located on 2nd floor of 10-story building), size of classroom, number of classrooms to be wired, location of equipment closet, mobility of the equipment, and so on. This information will help the satellite technicians prepare for the installation.

Notify NCTC

When you order your site survey, send an email containing the point of contact for your office to Dick Georgen at Dick_Georgen@fws.gov. Dick is the Distance Learning Coordinator for NCTC, and he will track the installation progress with AT&T.

What Other Distance Learning Classroom Equipment will I need?

Once you have the downlink equipment installed at your site, you will want to outfit your classroom to give your participants an optimal, interactive, distance learning experience. Make sure all of the equipment you purchase is compatible, especially with any of your existing systems. You will need a **TV color monitor** large enough for comfortable viewing by the maximum number of your anticipated participants. For some very large rooms this may also mean purchasing some type of projection unit.

You also need a **VCR** to record interactive television broadcasts for later use. And, so the participants can communicate with the instructors, you will need a **telephone** in the classroom. We recommend a full duplex audio conferencing station such as a Polycom Sound Station, which provides high quality verbal interaction and allows participants to speak without clipping or echoing. Instructors can accept questions via fax from the participants, so you may also want to purchase a **fax machine, or a combination fax/printer** if you have a computer in the classroom.

What personnel do I need to support distance learning?

You need to assign a person(s) to serve as a Primary Equipment Operator (PEO) and Site Coordinator. A description of responsibilities for each follows.

Primary Equipment Operator (PEO)

The PEO handles all technical aspects of the distance learning equipment, including coordinating the installation of the downlink equipment with AT&T. A back-up to this person is highly recommended. After the installation, this person is responsible for:

- Ensuring that the equipment is operational and the home channel (CNN) is being received.
- Setting up the equipment in the classroom for all broadcasts.
- Ensuring that the equipment is maintained.
- Calling Convergent to register equipment failures and monitoring resolution of problems.
- Coordinating with NCTC's television engineer, Martin Brady (304-876-7663), on any technical problems that may occur between NCTC and the downlink site.

Site Coordinator

NCTC asks that all participating sites designate an individual to serve as Site Coordinator for distance learning events. Typically, the site coordinator will:

- Work with the PEO to check that audio and video reception is satisfactory.
- Reserve a suitable classroom location for events.
- Promote the event locally and provide facility information to participants.
- Direct individuals to register on-line at NCTC's distance learning web page, distancelearning.fws.gov.
- Download course material (e.g., sign-in sheet, evaluation, participant guide) from NCTC's web site and distribute those materials to participants on the day of the event.
- Ensure that participants sign in on the day of the event.
- Assist participants with the use of the distance learning equipment.
- Encourage active participation in event activities.
- Receive instructions from the Course Leader regarding any activities they may be asked to

facilitate.

- Encourage participants to complete the event evaluation (included in the handout).
- Fax/Mail the sign-in sheet and completed evaluation forms to NCTC following the event.
- Record the broadcast for office use.
- Advise the NCTC Distance Learning Team (Donna_Lam@fws.gov, Lisa_Deener@fws.gov, Dick_Georgen@fws.gov) of training employees need.

How do I support the installation?

AT&T responsibilities include:

1. At the time of installation, AT&T advises the PEO if special equipment or non-standard installation items charges will exceed pre-approved amounts.
2. AT&T will install the downlink equipment in accordance with the PEO-approved plan (to include any pre-approved changes).
3. After activation, AT&T aligns the antenna to the satellite, performs a signal strength test and verifies proper satellite acquisition. AT&T also demonstrates and completes downlink acceptance testing.

FWS responsibilities include:

1. The PEO provides AT&T with accurate site information, including a central point-of-contact at the location, specific site address, and site telephone number(s).
2. The PEO coordinates the ordering of all equipment per the network design for installation at the downlink site.
3. The PEO prepares the site, including locating appropriate electrical outlets, a telephone and a television monitor. AT&T installs all downlink terminal equipment as outlined in planning sessions.
4. The PEO inspects the installation, verifies acceptance test demonstration, and signs the Installation Completion Report as acceptance of the downlink site.

How do I know the system is properly installed?

AT&T will demonstrate the successful operation of all downlink equipment to the PEO, in accordance with the following criteria, prior to the signing of the Installation Completion Report:

1. Transmission and reception of a compressed digital signal. PEO is responsible for ensuring that a television monitor is available for this test.
2. Measurement and recording of a PowerVu (IRD) signal quality reading of seven (7) or greater in clear weather.
3. Observe audio conferencing unit talker levels and satellite audio muting to ensure proper operation, where applicable. PEO is responsible for ensuring that a telephone and outlet are available for this test.
4. Provide verification of the IRD control channel functions such as authorization and channel select.

How do I arrange for maintenance?

Maintenance is mandatory with the purchase of the downlink equipment and costs \$599.88 per year. AT&T provides a full-service maintenance package for downlink systems through Convergent. Although this package does not provide routine monthly or quarterly maintenance, Convergent does, upon receiving a phone call from your PEO, restore downlink systems that fail due to equipment failures. The CLIN for Downlink Maintenance Service is D-0001.

If you have any problems with the equipment, Convergent provides maintenance service Monday-Friday, from 8:00-5:30 ET. They have assigned the Fish and Wildlife Service its own toll-free number to call when technical problems arise: **1-888-238-2855**. If you are not receiving the home channel (CNN) or receiving poor audio or video, call this number. It's a good idea to routinely check that you are receiving the home channel (CNN) and that the audio and video are of good quality. Again, it is your telephone call that initiates "help."